

2 weeks (m-F)
Soil = Surface and Subsurface (VOC's)

VOC's

- 195 Field Samples
- 10/195 → 100
- 120 Field Duplicate Samples - (1/10)
- 10 Equipment Rinse Samples - (Based on 10 days)
- 0 Field Blank Samples
- (14) Trip Blank Samples (H_2O) - (1 per sample cooler)
will have to increase # due to # of samples to fit in a cooler.

215 Field Samples + Field Dups

$$\frac{ms/msD}{Y_{20}} \quad 20 \quad \boxed{215}$$

This is some bag items.

8 items per cooler

Sample cooler items

- (3) 5 gram samplers $\approx 3-40 ml$ vials
- (1) 4 oz jar
- 1 Trip blank $\approx 3-40 ml$ vials

28.25 coolers
8 $\frac{1}{226}$ samples

$$\frac{20 \text{ dups}}{11 \text{ ms/msD}} \quad \boxed{215} \quad \text{Total Soil Samples + Dups}$$

+ 11 ms/msD samples

(31) ~~*~~ $\boxed{226}$ Total soil samples including Dups and ms/msD's.

(31) Total ^{Soil} QC samples 11 ms/msD + 20 field Dups.

(*) Trip blank # will have to increase to at least 28.

(*) $\boxed{28}$ Total (Trip blank's) water QC

2 weeks (m-F)

Soil = Surface and Subsurface (SVOC's)

SVOC's

- 195 Field Samples
- 20 Field Duplicate Samples
- 10 Equipment Rinse Samples (Based on 10 days) - 2-1L Ambers
- 0 Field Blank Samples
- 0 Trip Blank samples

215 Field Samples + Field Dups

$$\frac{10.75}{Y_{20}} \Rightarrow 11 \text{ ms/msD samples}$$

$\boxed{215}$

Sample cooler items

For Ambus:

* Can place 4-1L

Ambus in a cooler.

$\frac{X2}{20} \quad 1L \text{ ambus}$

$\frac{5}{5}$ in a box.

$\boxed{4/20}$

* Need 5 coolers for Ambus to be used for SVOC ER

$$\frac{20 \text{ dups incl.}}{11 \text{ ms/msD}} \quad \boxed{215} \quad \text{Total Soil Samples + Dups}$$

$\frac{11}{ms/msD}$ samples

$\boxed{226}$ Total ^{Soil} Samples including QC - (SVOC's)

(*) $\boxed{10}$ Total (ER's) Water Samples

(*) $\boxed{31}$ Total ^{Soil} QC samples (11 ms/msD + 20 field Dups)

* For Soil jars

Can place $\approx 10-$

8 oz soil jars in a cooler.

$\boxed{226}$

$\frac{10}{226}$
* Need ~~23~~ coolers for 8 oz soil jars to be used for SVOC samples



2 weeks (In-P)Soil - Surface and Subsurface (metals)metals

195 Field Samples

20 Field Duplicate Samples (1/10)

10 Equipment Rinse samples (Based on 10 days)

0 Field Blank Samples

0 Trip Blank Samples

215 Field Samples + Field Dups

10.75 \Rightarrow 11 ms/msD samples

ms/msD 20/215

1/10

④ 215 Total Soil Samples + Dups - metals

ms/msD's samples

④ 226 Total Soil Samples including QC - (metals)④ 10 Total (ER's) Water Samples④ 31 Total ^{Soil} QC Samples (11 ms/msD + 20 Field Dups)Sample cooler items

For Soil jars.

Can place \approx 10-8 oz

Soil jars in a cooler.

22.6

10/226

* Need 23 coolers
for 8 oz soil jars
to be used for metals

For 1-L HDPE poly.

Can place 3 - 1-L poly
in a cooler.

1.25

8/10

* Need 2 coolers
for 1L polys to
be used for metals
ERSoil - surface and Subsurface (TOC)

195 Field Samples

20 Field Duplicate Samples (1/10)

0 Equipment Rinse samples

0 Field Blank Samples

0 Trip Blank Samples

* 215 Field Samples + Field Dups

NO ms/msD count

④ 20 Total (Dups) QC④ 215 Total Samples + Field DupSample cooler items

10/215

Need 22 coolers
for 8 oz soil jars
used for TOC.Soil - Surface and Subsurface (Particle size)

195 Field Samples

20 Field Dup Samples

0 ER, FB, TB's

215 Field Samples + Field Dups

NO ms/msD count

Sample cooler items

④ = 500 grams in a bag

? Need 11 coolers④ 20 Total (Dups) QC④ 215 Total Samples + Field Dups

2 weeksSoil - Surface and Subsurface - (tributyltin)

102 Field Samples

1 Field Dups $\frac{1}{10}$

0 ER's, FB's, TB's

3 Field Samples + Dups

$$\begin{array}{r} 3 \text{ Total Soil Samples (Tributyltin)} \\ + 1 \text{ ms/msD sample} \\ \hline \end{array}$$

14 Total Soil Samples including QC

2016

2 Total Soil QC Samples ($1 \text{ ms/msD} + 1 \text{ Dups}$)One weekSediment Samples - VOC

30 Field Samples

3 Field Dups $\frac{1}{10}$

0 ER

1 FB

3 TB

Change to 3 TB's due to # of Samples.

33 Total Sed. Samples + Dups - VOC's

$$20 \boxed{33} \text{ 2 ms/msD samples}$$

33 Total Sed Samples

+ 2 ms/msD's

35 = Total Sed. Samples including Dups and ms/msD's

5 Total Sed. Samples ($2 \text{ ms/msD's} + 3 \text{ Field Dups}$)

5 Trip blanks = Total (TB) water QC.

Sample cooler Items

(3) 5 gram containers and ①
 $\frac{1}{10}$ oz jar.
 $\frac{4,135}{8 \boxed{33}}$

5 Coolers for
VOC Sed Samplesone weekSediment Samples - SVOCs

30 Field Samples

3 Field Dups $\frac{1}{10}$ 8 ER's $\frac{1}{per day}$

0 FB's

0 TB's

Sample cooler Items

$$10 \boxed{35}$$

4 Sample coolers per 8 oz Jars

33 Total Sed Samples + Dups - SVOCs

$$20 \boxed{33} \text{ 2 ms/msD samples}$$

$$33 \text{ Samples} + 2 \text{ ms/msD}$$

$$33 + 2 = 35 \text{ Total Sed Samples + Dups + QC}$$

5 Total (ER) Water Samples.

Sample coolers per 11
Jars for ER

$$5 \times 2 = 10$$

$$\frac{10}{2.5} = 4$$

3 Coolers per
1-L container

one weekSed Samples - (metals)

30 Field Samples

3 Duplicate samples

Change to
5. Only doing
Sed. Sampling
for a week

⑧ ER's 1 per day
○ FB's
○ TB's

[3] Total Sed samples + Dups metals

$$\frac{1.65}{\begin{array}{r} 1.65 \\ \times 20 \\ \hline 33 \end{array}} \quad 2 \text{ ms/mD's samples}$$

$$\frac{\begin{array}{r} 30 \text{ ms} \\ + 2 \text{ ms/mD's} \\ \hline 32 \end{array}}{3} \quad \boxed{35} \quad \text{Total sed. Samples + Dups + QC}$$

④ [5] Total (ER) water samples

one weekSed. Samples - AVS/SEM

10 Field Samples

1 Field Dup 1/10

0 ER's

0 FB's

0 TB's

11 Total Sed Samples + Dups = AVS/SEM

$$\frac{\begin{array}{r} 1 \text{ ms/mD} \\ + 1 \text{ ms/mD} \\ \hline 2 \end{array}}{10} \quad 1 \text{ ms/mD sample.}$$

④ [12] Total Sed. Samples + Dups + QC

Sample cooler Itens

Sample cooler for 8oz Jars
 $\frac{35}{10} \quad 3.5$
 $10 \boxed{35}$

④ cooler for
8oz Sed. jars.

Sample cooler for 1-L polys

① cooler for
1-L polys.

Sample cooler Itens

Sample cooler per 4oz
Jars

1 cooler ⑫ 4oz jars.

One weekSed Samples - (TOC)

30 Field Samples

3 Field Dups 1/10

0 ER's

0 FB's

0 TB's

④ [33] Total Sed Samples + Dups = TOC

No ms/mD samples

Sample cooler Itens

$\frac{32.3}{10} \quad .33$

4 Sample coolers

for 8oz jars
used for TOC.

One weekSed Sampling - (Particle size)

30 Samples

3 Field Dups

0 ER's

0 FB's

0 TB's

Sample cooler items

500 grams in a bag

Need 2 sample coolers

* [33] Total Sed Samples + Dups - (TOC)

No BBS/msD samples

one week

Surface water - VOC

33 Field Samples

4 Dups $\frac{1}{10}$

0 ER's

0 FB's

0 TB's

Change to
50 During
Surface
water sampling
for a weeks

 $\rightarrow^5 \underline{\textcircled{3}} \text{ TB's}$ Sample cooler items $\frac{89}{x^3}$

170 VOCs

 $\frac{2.6}{45} \sqrt{170}$ 3 Sample coolers
for VOCs37 Total Surface water samples + Dups
+ 3 TB's

40 Total samples (Field samples + Dups + TB's)

 $\frac{2.6}{20/40}$

2 ms/msD samples.

$\frac{4 \text{ Dups}}{4 \text{ ms/msD}}$
 $\frac{3 \text{ TB's}}{3}$
 $\frac{0}{0}$

 $\frac{40}{+ 3}$

37 + 4 + 3 + 2

Total Samples (Field + Dups + TB's + ms/msD)

one weekSurface water - SWCs

33 Field samples

4 Dups $\frac{1}{10}$

0 ER's

0 FB's

0 TB's

Sample coolers39 samples $\times 2 = 78$

9.75

4 18820 Sample coolers
for 1-L Anabs.

37 Total Field Samples w/ Dups.

$$\frac{1.85}{20 \sqrt{37}} = 2 \text{ ms/mD's}$$

37

+ 239 Total samples (Field + Dups + ms/mD's)one weekSurface water - metals (Not Filtered)

33 Field samples

4 Dups

0 ER's

0 FB's

0 TB's

Sample coolers

39 samples

(13) Sample coolers
for 1-L polys

37 Total Field Samples + Dups

$$\frac{1.85}{20 \sqrt{37}} = 2 \text{ ms/mD's}$$

37

+ 239 Total samples (Field + Dups + ms/mD's) - Filteredone weekSurface water-metals (Filtered)

33 Field samples

4 Dups

0 ER's

0 FB's

0 TB's

Sample coolers

39 samples

13 Sample
coolers

for 1-L polys.

37 Total Field Samples + Dups

$$\frac{1.85}{20 \sqrt{37}} = 2 \text{ ms/mD's}$$

37

+ 239 Total samples (Field + Dups + ms/mD's) - Filtered

One week

Surface water - TSS

33 Field Samples
 4 Dups
 0 ER's
 0 FB's
0 TB's

Sample coolers

$$\begin{array}{r} 4 \\ \times 6 \\ \hline 24 \\ 8 \quad \boxed{37} \end{array}$$

5 Sample coolers for
TSS 1-L polys.

37 Total Field Samples + Dups

0, ms/msds...

37 Total Field Samples + Dups

One week

Ground Water - (VOCs)

27 Field Samples
 3 Dups Y/o
 0 ER's
 0 FB's -
(3) TB's

Sample coolers $35 \times 3 = 105$

③ Sample coolers for
GW - VOCs

33 Total Field Samples + Dups. + TB's

$$\begin{array}{r} 1,65 \\ \hline 20 \quad \boxed{33} \end{array}$$

2 - ms/msds

33+ 235 Total Field Samples + Dups + TB's + ms/msds

One week

Ground Water - SVOC's27 Field samples

3 Dups
 5 ~~ER's~~ ER's
 0 FB's
 0 TB's

Sample coolers

$$\begin{array}{r} 37 \\ \times 2 \\ \hline 74 \end{array}$$

4 $\frac{1}{2}$ ^{1.5} ~~1.5~~

19 coolers.

35 Total Field Samples + Dups + ER's.

$$\begin{array}{r} 1,75 \\ \hline 20 \quad \boxed{35} \end{array}$$

2 - ms/msds

35+ 237 Total Field Samples + Dups + ER's + ms/msds

One week
Ground water - Metals - (Unfiltered)

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27 Field Samples
3 Dups
5 ER's
0 FB's
0 TB's

Sample coolers

$\sqrt{37}$

5 Sample coolers

35 Total Field Samples + Dups + ER's
 $\sqrt{1,75}$
 $20\sqrt{35} \quad 2 \text{ ms/mD}'s$

$\frac{35}{+ 2}$
 $\underline{37} \quad \text{Total Field Samples + Dups + ER's + ms/mD}'s$

One week
Ground water - metals (- filtered)
27 Field Samples
3 Dups
5 ER's
0 FB's
0 TB's

Dissolved
metals

35 Total Field Samples + Dups + ER's
 $\sqrt{1,75}$
 $20\sqrt{35} \quad 2 \text{ ms/mD}'s$

$\frac{35}{+ 2}$
 $\underline{37} \quad \text{Total Field Samples + Dups + ER's + ms/mD}'s$
